

ABSTRACT

An object of the present invention is to provide a gait pattern generating device by which a gait pattern of a robot such as a humanoid bipedal walking robot having a structure easy to fall down can be generated easily in real time. This device calculates a driving quantity of the center of gravity in one moment using a preview control method based on feedback of the motion state of the center of gravity in that moment, and feed-forward of a future ZMP trajectory up to a few seconds from that moment. Next, the robot is driven to obtain the obtained center-of-gravity trajectory. Thus, a walking motion is attained.